

*The Center for Coastal Monitoring and Assessment's mission is to assess and forecast coastal and marine ecosystem conditions through research and monitoring.*

## The Habitat Digitizer Extension

### An ArcGIS 9 Extension for Delineating and Classifying Features in Georeferenced Imagery

*The Habitat Digitizer Extension is used to delineate habitats by visually interpreting georeferenced imagery, such as aerial photographs, satellite imagery, and side scan sonar. Users can digitize polygons, lines and points and select attributes from dialog boxes containing a hierarchical classification scheme. Originally created in 2001 for Arcview 3 by the National Oceanic and Atmospheric Administration's (NOAA's) Center for Coastal Monitoring and Assessment (CCMA), in 2006, CCMA responded to user requests to update the extension for ArcGIS 9.*

### Hierarchical Classification Schemes for Attributing Features

Using the extension, the user can create a new hierarchical classification scheme (Figure 1) or import an existing scheme from a database (dbf) file. The classification scheme holds all possible attributes for the shapefile's features.

This useful extension to ArcGIS 9 includes step by step instructions and descriptions of the various functions. It may be downloaded at: <http://ccma.nos.noaa.gov/products/biogeography/digitizer/index.html>.

### Easy Shapefile Generation

The extension will generate a new shapefile and add all of the fields necessary to hold the attributes of the classification scheme. The user will be required to set projection information for the shapefile when creating it.

### Enhanced Digitizing Features

The extension adds more functionality to the standard ArcGIS editing tools. After digitizing a feature, the user selects attributes using a dialog containing the classification scheme (Figure 2). The extension prevents the creation of overlapping polygons, clipping away the area of existing polygons if a new polygon partially covers it or creating a donut polygon for new or existing features. For line features, a new tool will automatically split an existing line with a newly digitized line.

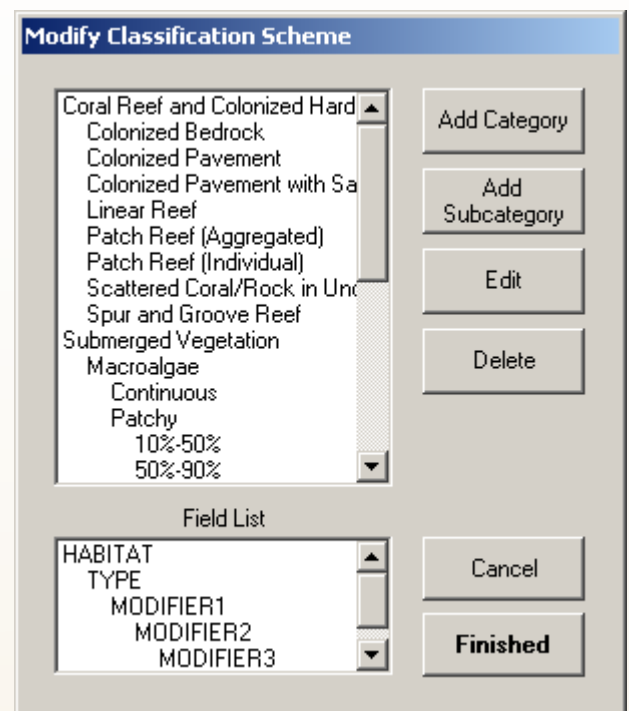


Figure 1. The active dialog box is used to create and modify the classification scheme, simultaneously showing the hierarchical field structure of the scheme.

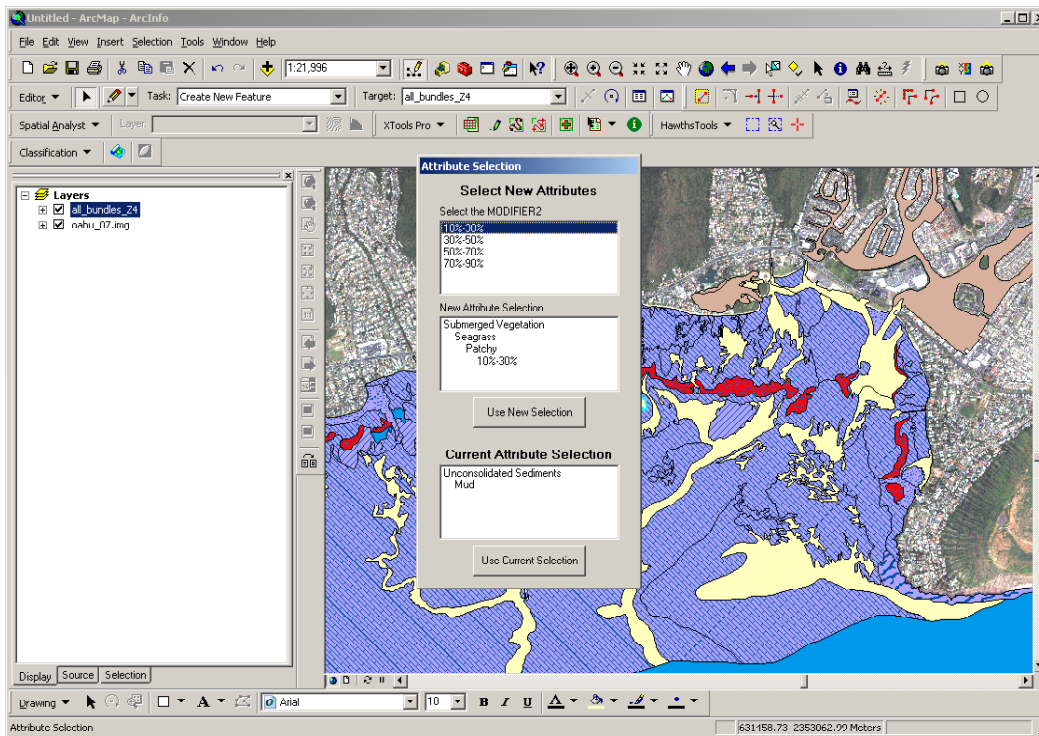


Figure 2. The attribute selection dialog shows the hierarchical structure of the classification scheme, allowing an easy selection of attributes.

## Error Checking Abilities

The extension includes two different error checking tools. The first will ensure a shapefile contains the proper fields to hold the classification scheme. This is useful when using a new classification scheme on existing shapefiles. The other will fix mismatches in the attribute table between a unique ID and the attributes as defined by the classification scheme.

## Digitizing Consistency

The extension contains settings to ensure uniformity in data creation. If feature delineation needs to be conducted at the same scale, a scale restriction setting will allow users to digitize features only at a designated scale. Additionally, a minimum mapping unit setting will warn if features are digitized smaller than the predetermined threshold.

## More Information

The Habitat Digitizer Extension runs on ArcGIS 9, and can be downloaded from: <http://ccma.nos.noaa.gov/products/biogeography/digitizer/index.html>. The downloaded file contains the extension, a help file, a sample classification scheme and a sample layer file. This product can be used in all types of habitat classification projects.

For more information on the Habitat Digitizer Extension, please contact Ken Buja at (301) 713-3025 x140 or [Ken.Buja@noaa.gov](mailto:Ken.Buja@noaa.gov).

To learn more about CCMA's biogeography projects, please contact Mark Monaco at (301) 713-3025 x160 or [Mark.Monaco@noaa.gov](mailto:Mark.Monaco@noaa.gov), or visit: <http://ccma.nos.noaa.gov/about/biogeography/welcome.html>

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